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EXAMINER

MENON, KRISHNAN S

ART UNIT PAPER NUMBER

1723

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b> 10/047,244	<b>Applicant(s)</b> JUMPPANEN ET AL.	
	<b>Examiner</b> Krishnan S Menon	<b>Art Unit</b> 1723	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2004.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-8 and 10 is/are rejected.  
 7) ☒ Claim(s) 9 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Claims 1-10 are pending.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-8 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over JP H6-227994 in view of JP 60-115699, Chemical Engineer's Handbook, Perry and Green, p ages 13-53-13-57, and Somekh et al (US 3,714,033).

JP(994) discloses a process for separating essential oils comprising steam distillation (page 3, Para 0001) (applicant has steam distillation or extraction as alternate but equivalent processes in claim 1) to a mixture containing essential oils and water, contacting with divinyl benzene polystyrene adsorbent or activated carbon (page 3, para 0001) and then desorbing the essential oils using a solvent that is more hydrophobic than the hydrophilic phase (para 0036-page 13 of English translation: hydrophilic phase is water, eluting solvent is acetone) as in instant claim 1 and 2. The water (hydrophilic phase) temperature is at 60° C (page 8, para 0020) as in instant claim 3; the hydrophobic absorbent is synthetic polymer – divinyl benzene cross-linked-polystyrene, activated carbon, etc, as in instant claim 4 and 5. (page 8: 0016,0017); material is Cyprus (page 3: claim 2) as in instant claim 6; Cyprus or yellow oils (page

11: 0030) as in instant claim 7; and the process is continuous as in instant claim 10 (page 11: 0029).

JP (994) is silent on recycling the hydrophilic solvent, water, as in claim 1 of the instant application. Recycling of solvent in extractive and steam distillation is a commonly used as taught in a standard textbook of Chemical Engineering, such as Chemical Engineer's Handbook, by Perry and Green, 6<sup>th</sup> edition (see pages 13-53 through 13-57, and the figures), and by Somekh (033) (see figure and col 1 lines 58-60). It would be obvious to one of ordinary skill in the art at the time of invention to recycle the water used in the process. One of ordinary skill in the art at the time of invention would choose to recycle water in the process of JP (994) to recycle solvents in extraction and distillation processes for process economics as taught by the references.

JP (994) does not teach adsorption and elution from the same column as in claim 1 step (iv) or claim 8 – chromatographic separation. JP (699) teaches adsorbing in to a packed column and then eluting the essential oils from the same column using a solvent more hydrophilic (pages 5 and 6 of English translation). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of JP(699) in the teaching of JP(994) to elute the essential oils from the adsorption column to “selectively” recover (by chromatographic separation) the essential oils as taught by JP(699) (see ‘Effects of Invention’ on page 4).

***Allowable Subject Matter***

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claim 9 recites chromatographic recovery of myristic acid and irone from orris oil, which is obtained by steam distillation or extraction. The prior arts are JP(994) in view of JP(699) which do not specifically teach, nor is it obvious to one of ordinary skill in the art, chromatographic recovery of myristic acid and irone from orris oil.

### ***Response to Arguments***

Applicant's arguments filed 3/5/04 (supplemental comments to advisory action) have been fully considered but they are not persuasive for claim 1-8 and 10.

Applicant's main argument re patentability of the pending claims is the recycling of the hydrophilic solvent in claim 1. Applicant's argument about the extractive distillation taught by the Chemical Engineer's handbook are not relevant. What is pointed out in the rejection is the commonality of recycling solvents, which is a standard procedure followed in the industry, and is taught in standard text books (example – Perry). The international (PCT) examiner points this out in his written opinion (PCT-408). Applicant admits this fact in the last paragraph of page 2 of the specification. The additional reference Somekh teaches routine recycling of solvent. Arguments that the kind of distillation taught by Perry *teaches away* from the kind of distillation that is the subject of the present claim: the examiner would like to know how Perry teaches away,

and how Perry teaches away from recycling solvents (subject matter of the argument) in particular?

Arguments from the after final amendments were already addressed in the advisory action.

### ***Conclusion***


This is a first action in response to and RCE and is made non-final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan Menon  
Patent Examiner

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700